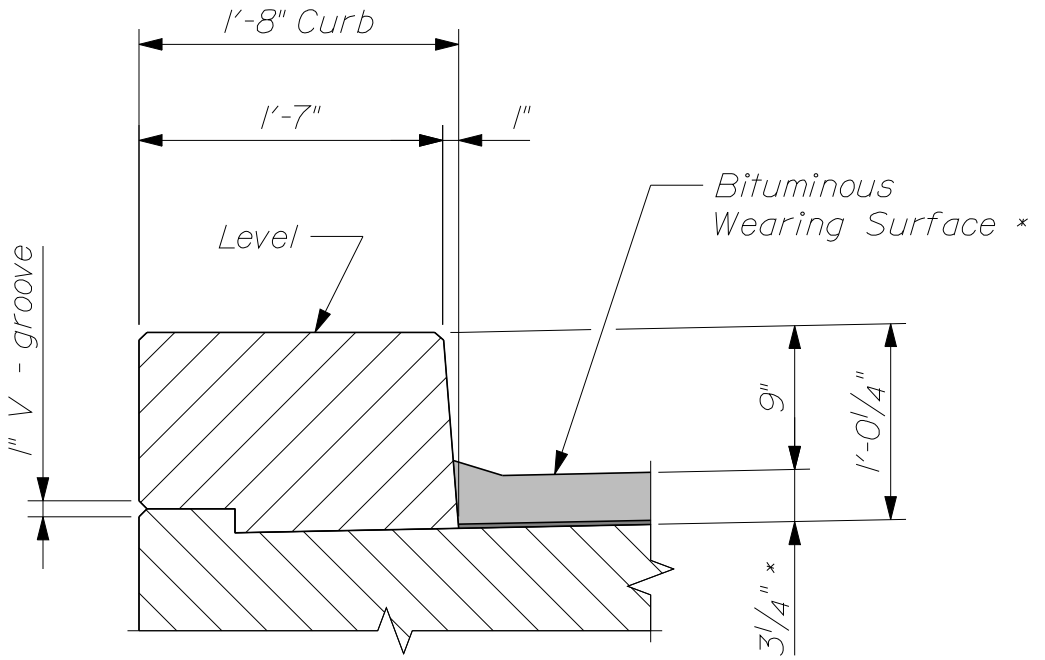
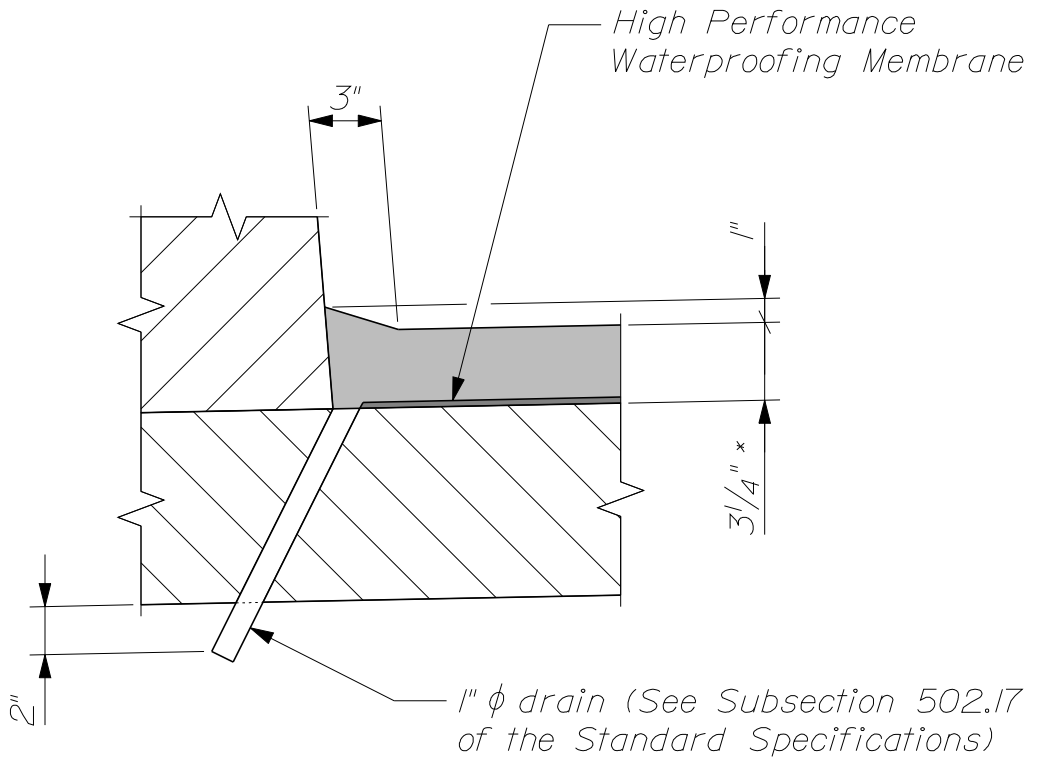


~ CURB WITH BITUMINOUS WEARING SURFACE ~ 1

* 3" Hot Mix Asphalt + 1/4" (nom.) High Performance Waterproofing Membrane



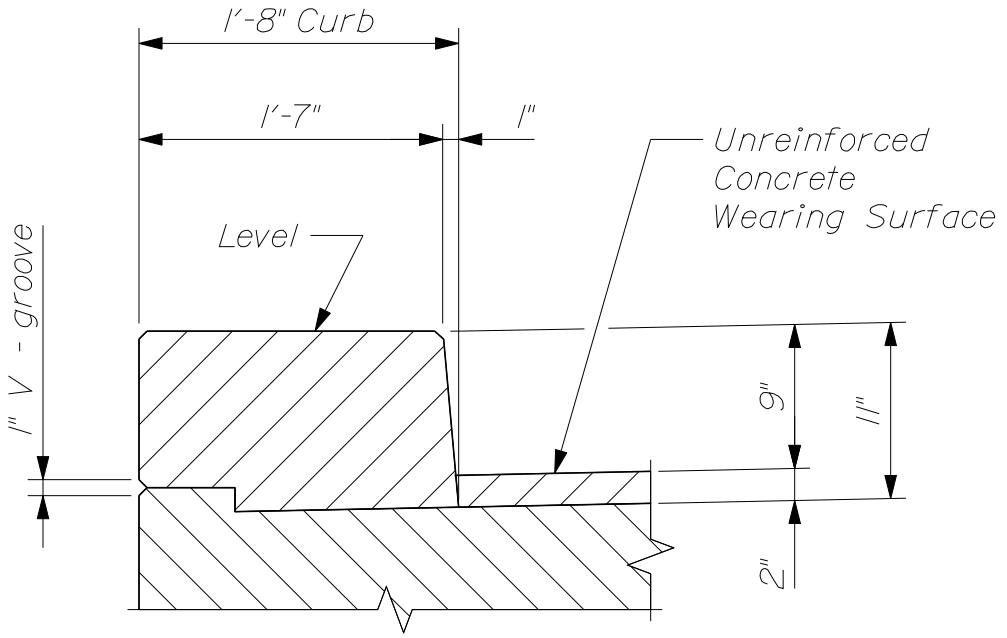
~ GUTTER DETAIL FOR BITUMINOUS W. S. ~ 1

Supplemental
Standard Detail

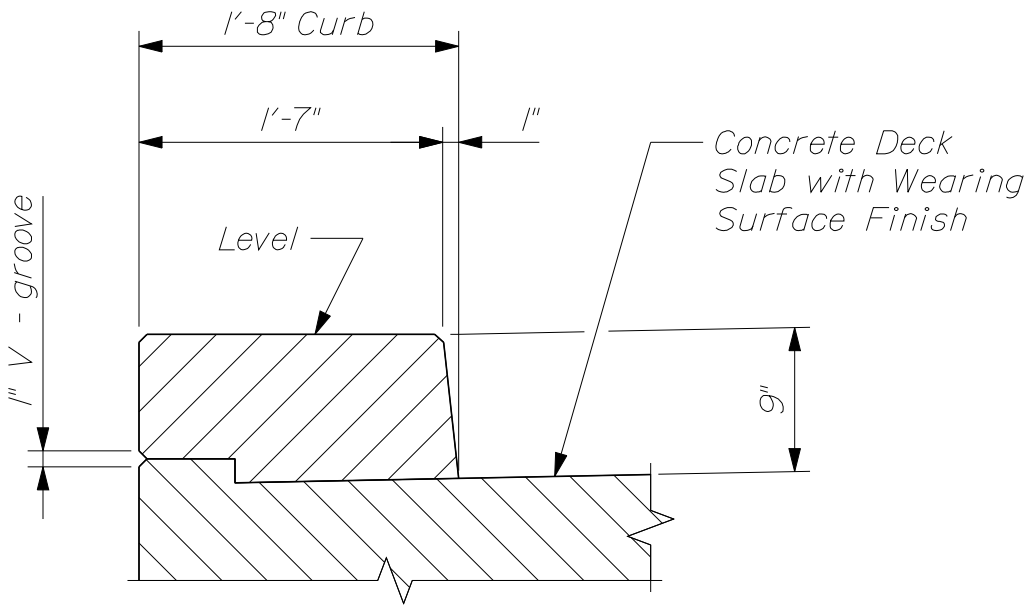
CONCRETE CURB

502(03)

1 August 2008



-- CURB WITH CONCRETE WEARING SURFACE --



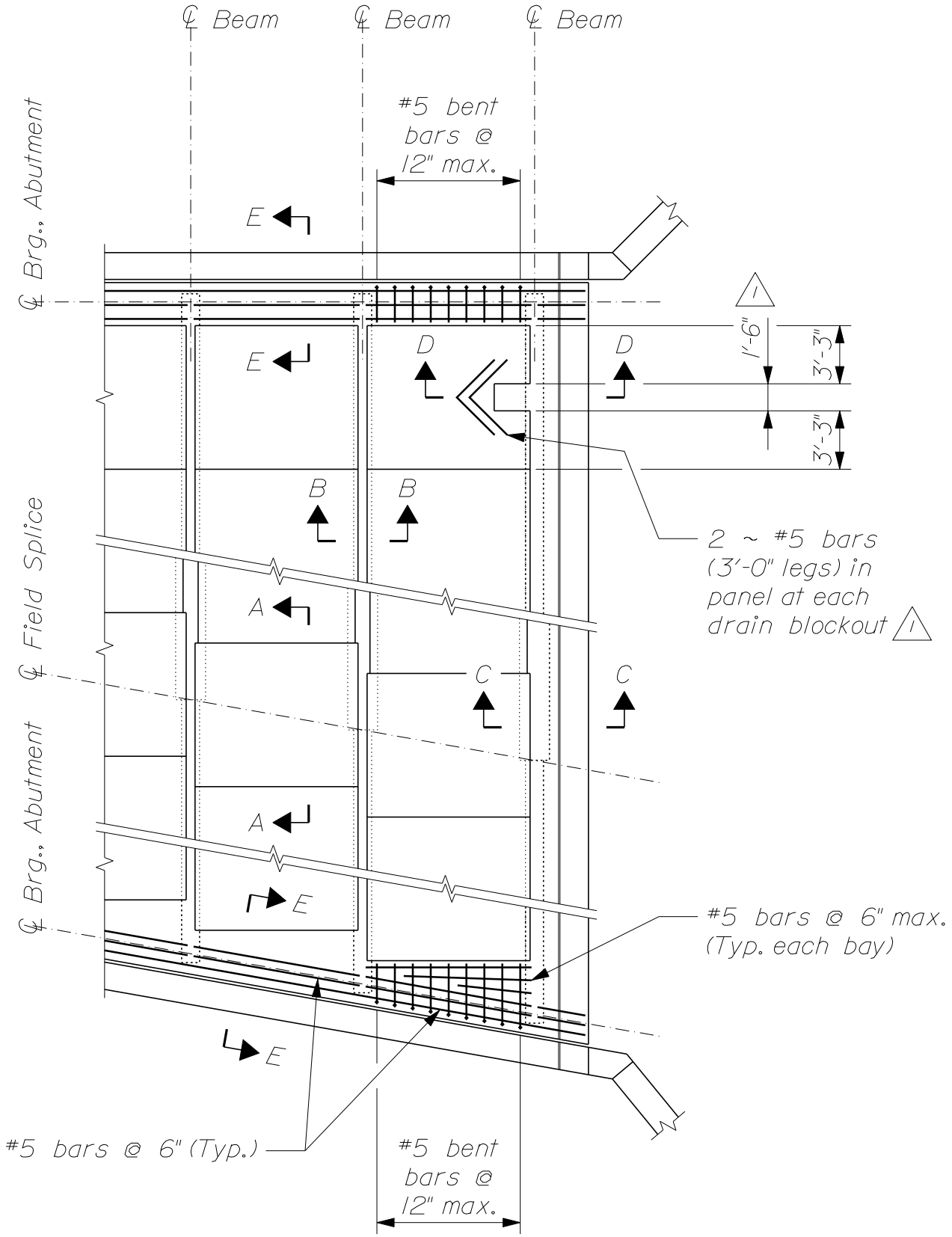
-- CURB WITH INTEGRAL WEARING SURFACE --

Supplemental
Standard Detail

CONCRETE CURB

502(03A) 1

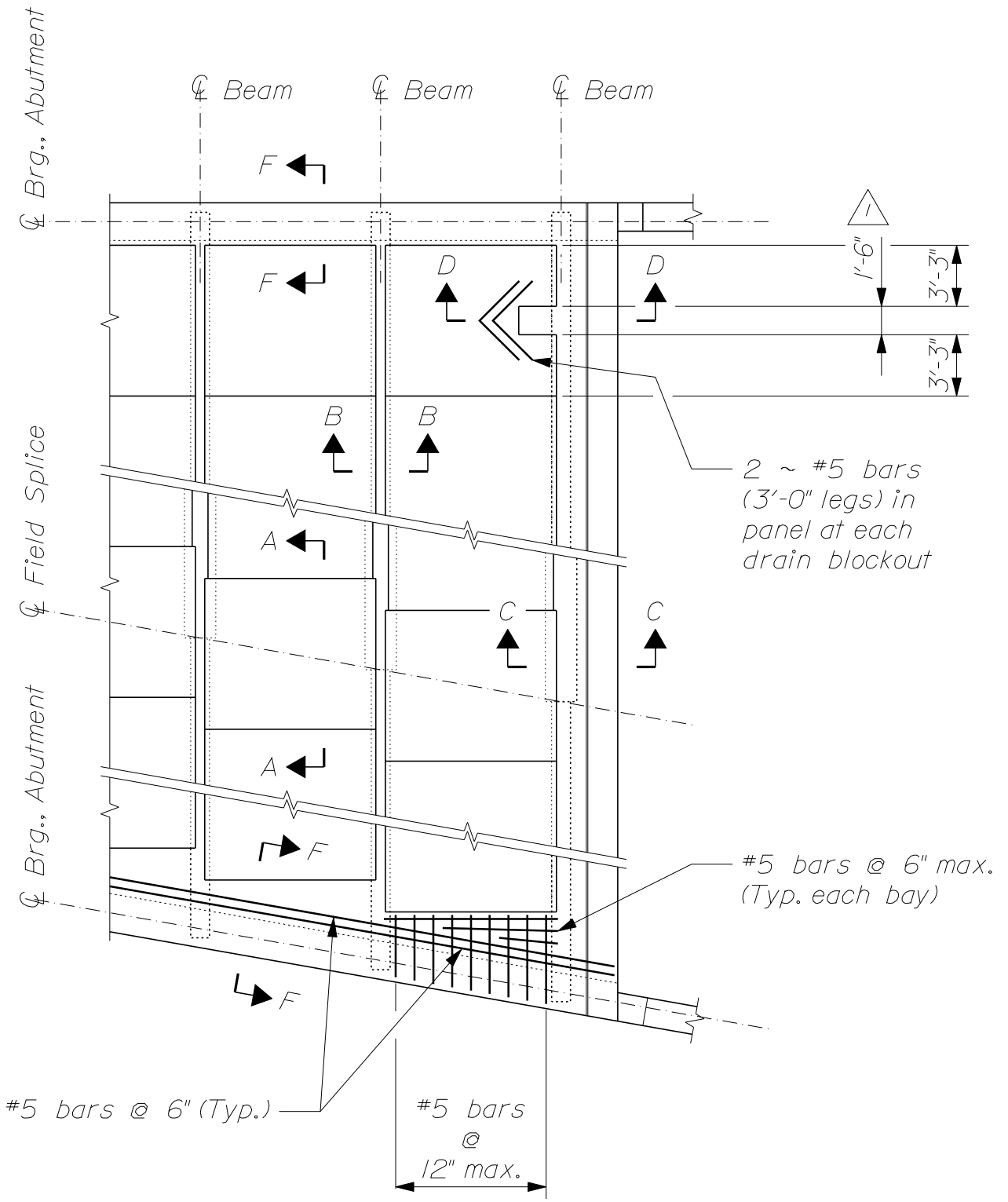
1 August 2008



~ LAYOUT PLAN (Cantilevered Abutments) ~

PRECAST CONCRETE DECK PANELS

Supl. Standard Detail 502(07) 1 August 2008



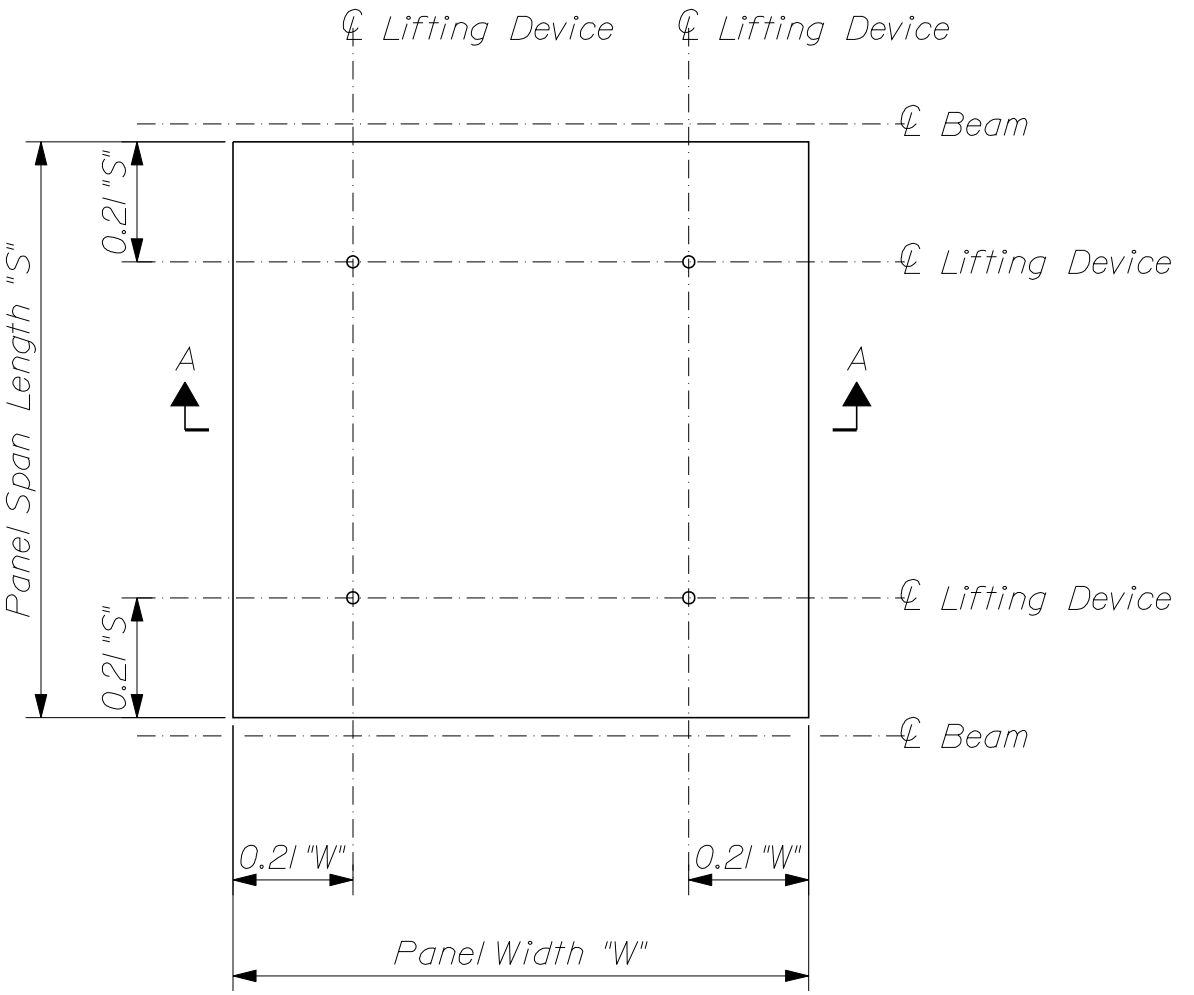
~ LAYOUT PLAN (Integral Abutments) ~

PRECAST CONCRETE DECK PANELS

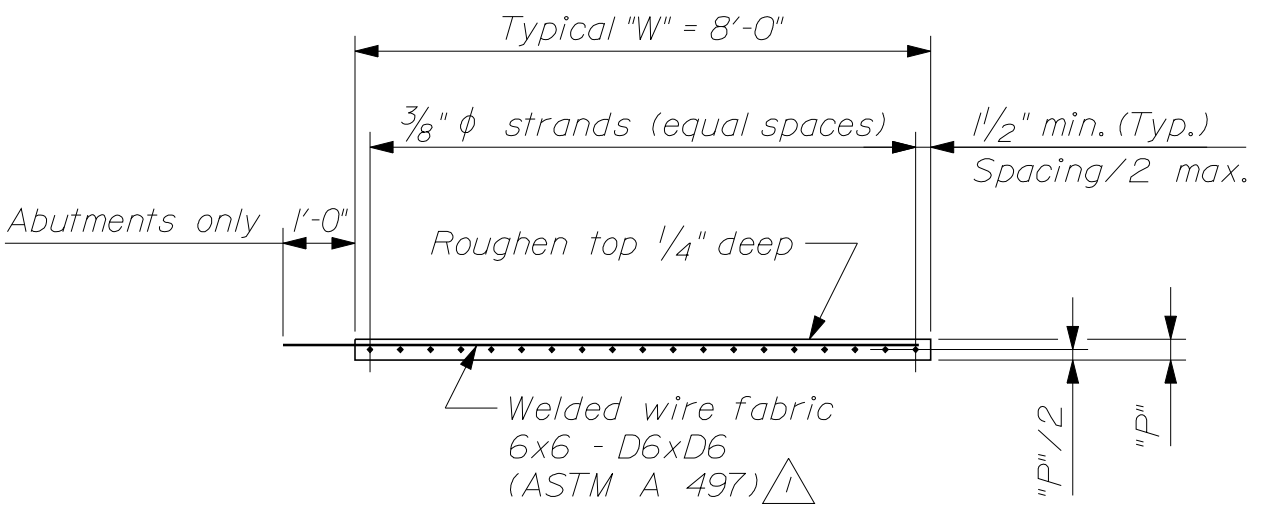
Supl. Standard Detail

502(07A) 1

1 August 2008



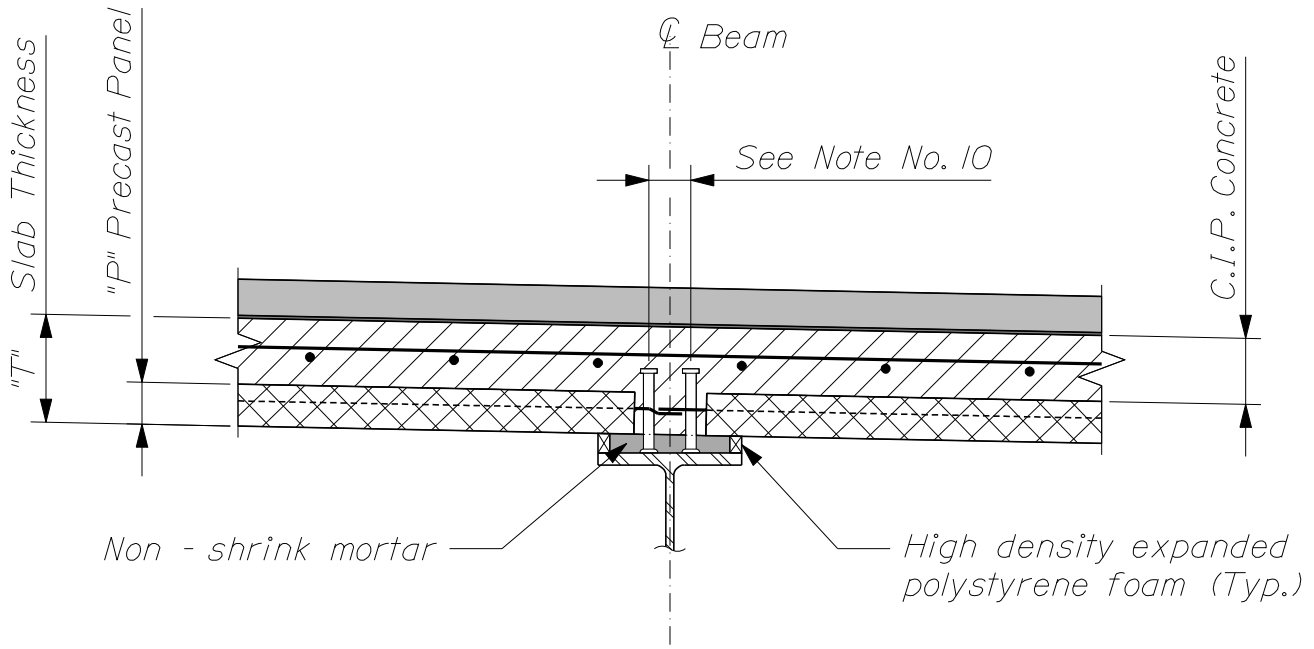
~ PRECAST PANEL PLAN ~



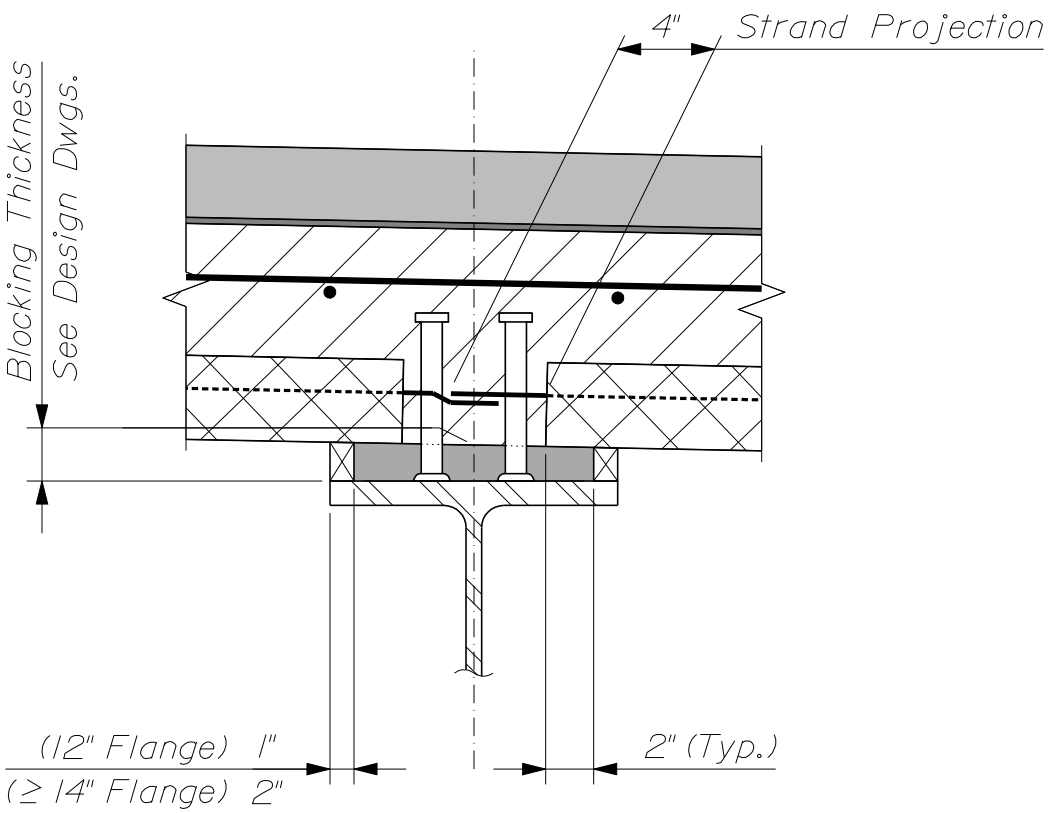
~ SECTION A-A ~

PRECAST CONCRETE DECK PANELS

Supl. Standard Detail 502(08) 1 August 2008



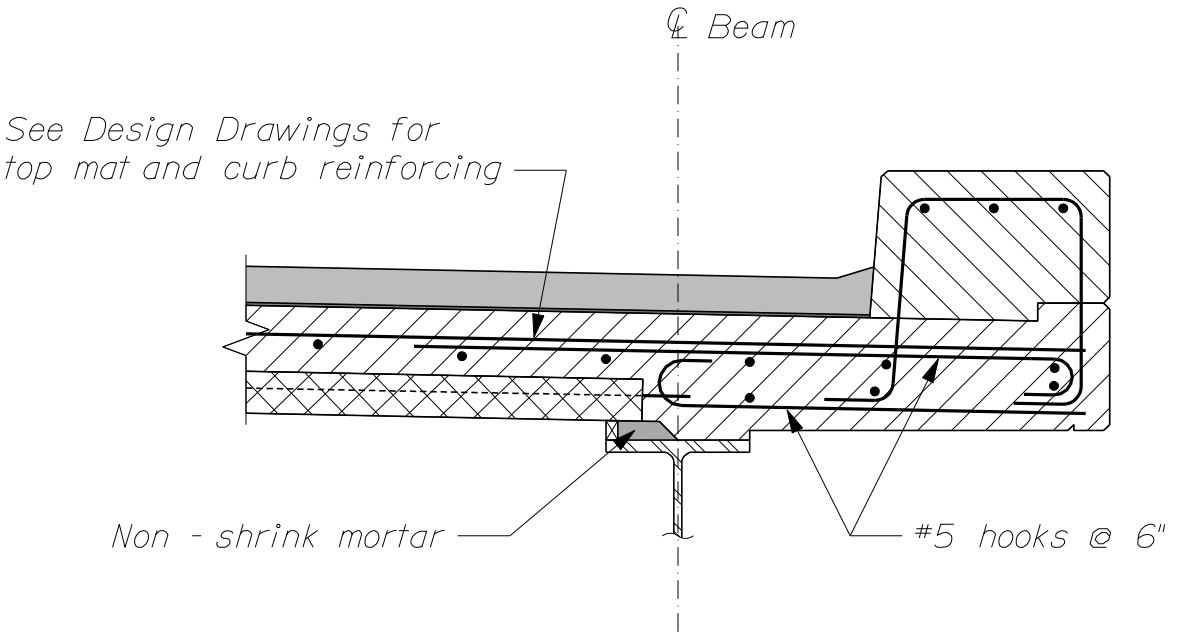
~ SECTION B-B ~



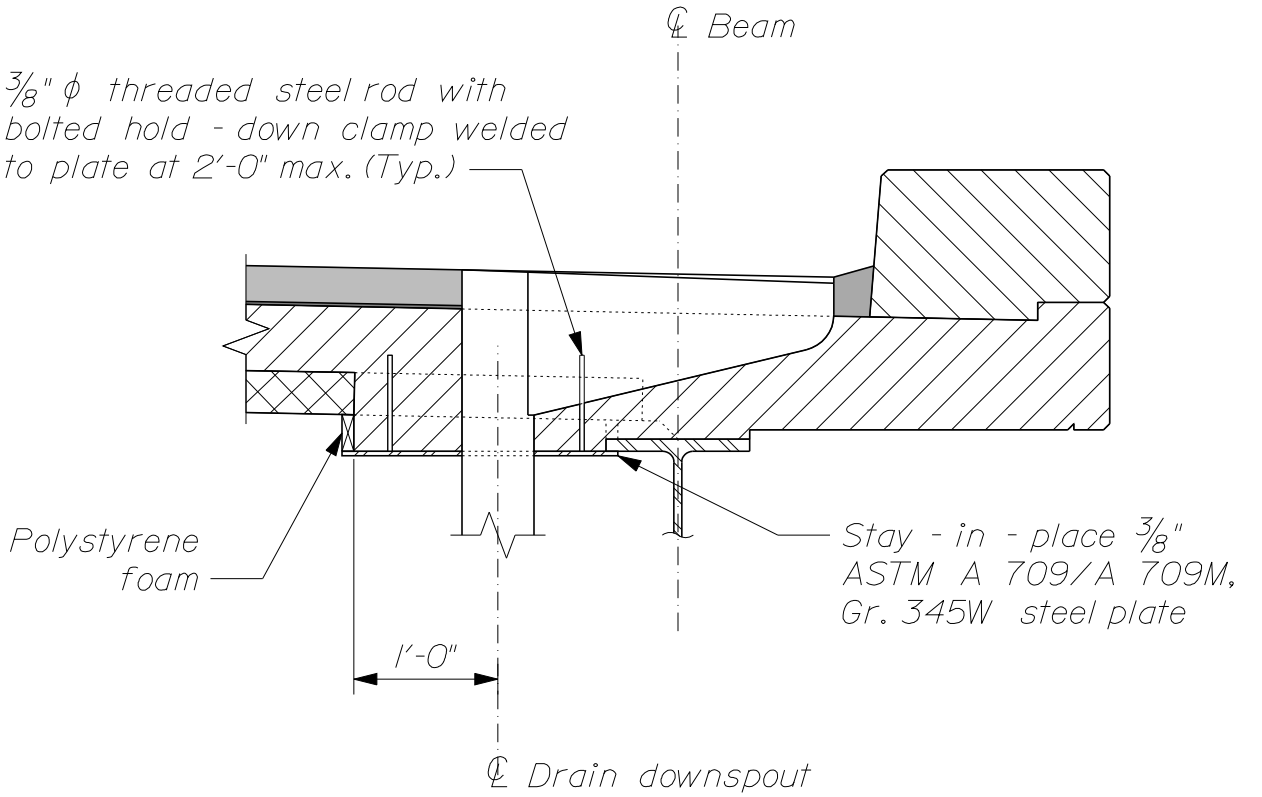
~ BLOCKING DETAIL ~

PRECAST CONCRETE DECK PANELS

Supl. Standard Detail 502(09) August 2008



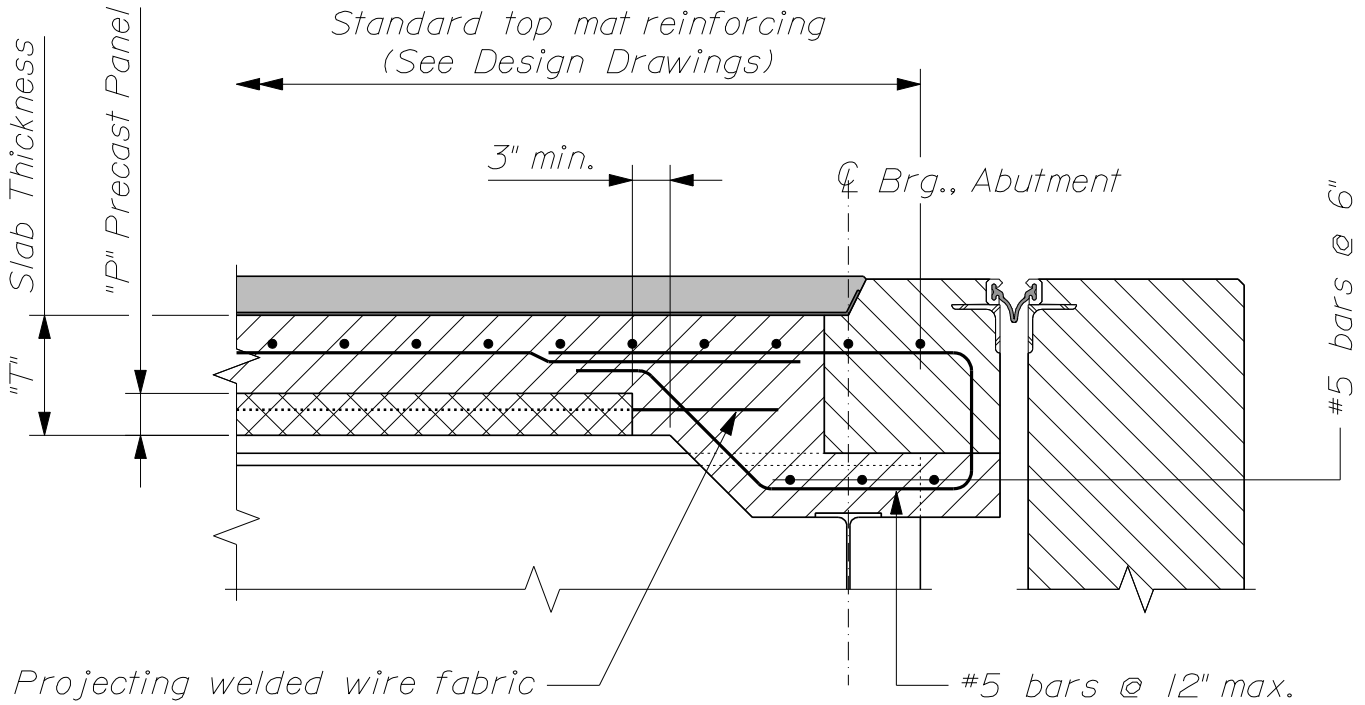
~ SECTION C-C ~



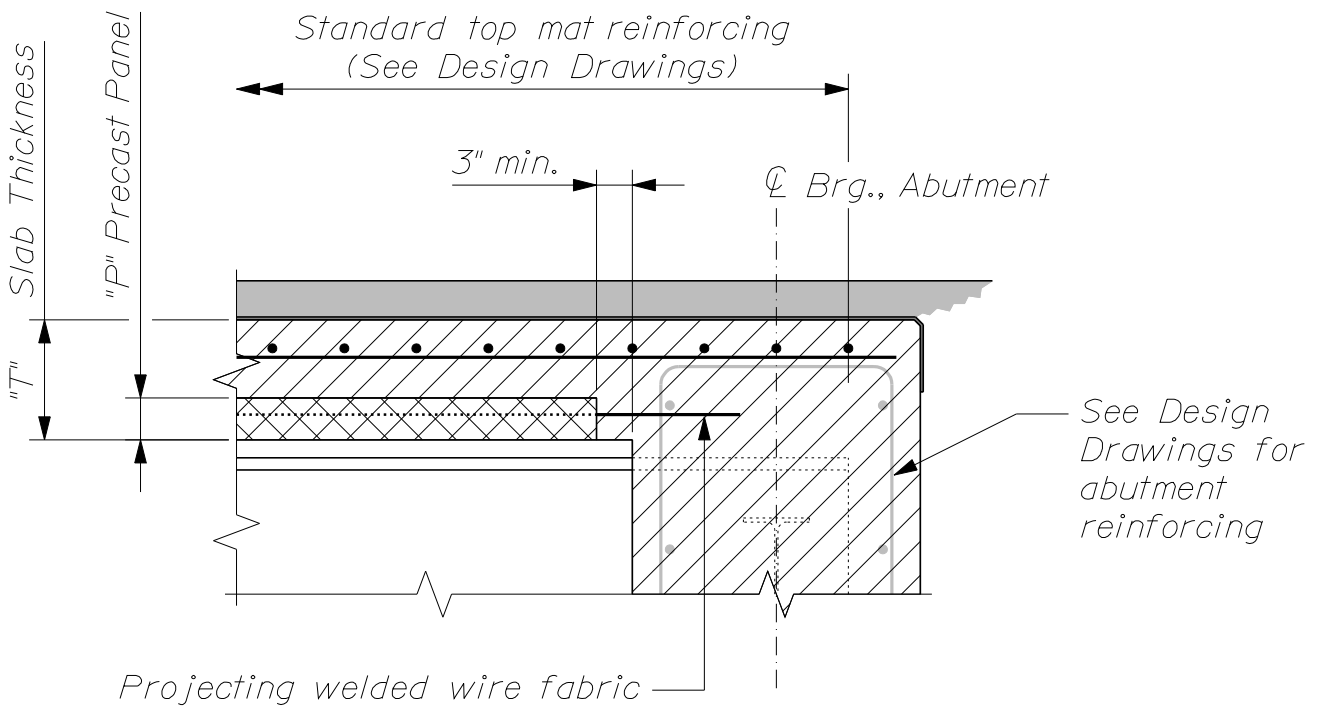
~ SECTION D-D ~

PRECAST CONCRETE DECK PANELS

Supl. Standard Detail | 502(10) | August 2008



~ SECTION E-E (Cantilevered Abutment) ~



~ SECTION F-F (Integral Abutment) ~ 1

PRECAST CONCRETE DECK PANELS

Supl. Standard Detail 502(11) 1 August 2008

DESIGN DIMENSIONS				
Panel Type	Max. "S"	Slab "T"	Panel "P"	Strands Required
A1	6'-0"	8"	3 1/2"	12
A2	6'-6"	8"	3 1/2"	14
A	7'-0"	8"	3 1/2"	16
B	7'-6"	8 1/2"	3 1/2"	17
C	8'-0"	8 1/2"	3 1/2"	19
D	9'-0"	9"	3 1/2"	20
E	9'-6"	9 1/2"	3 1/2"	22

NOTES: 1

1. Precast Concrete Deck Panels shall be fabricated in accordance with Section 535 of the Standard Specifications.

2. The contractor shall submit working drawings showing the exact layout of panel types and sizes.

3. Refer to the Design Drawings for structures with curved beams or angled splices.

4. Joints at expansion piers shall be treated similarly to the abutment joint details.

5. Panel widths of less than 8'-0" may be used. Provide strands in the ratio of the smaller panel width to 8'-0", multiplied by the number of strands given in the table, rounding up to the next even number of strands. The minimum panel width is 3'-0"

6. Prestressing strands shall be 3/8-in. diameter Grade 270 seven - wire low relaxation strands conforming to the requirements of ASTM A 416. Initial tension shall be 17.2 kips per strand.

(Continued)

NOTES (Continued):

1 7. A mat of #3 reinforcing bars spaced at 6 inches O.C. in each direction may be substituted for welded wire fabric. The welded wire fabric or the reinforcing bars shall have the same corrosion resistance characteristics and/or coating system as the reinforcing steel used in the cast - in - place portion of the deck slab.

1 8. Concrete for panels shall have a minimum 28 day compressive strength of 5000 psi and a minimum release strength of 4000 psi. Permeability shall be as required for the cast - in - place portion of the deck slab.

9. Precast deck panels require the use of 7-in. long shear connectors rather than the standard 5-in. length. Payment for any additional costs will be considered incidental to the precast deck panel pay item.

10. Where 1'-0" wide girder flanges are specified on the Design Drawings, the transverse shear connector spacing shall be $3\frac{1}{2}$ inches rather than the standard 6-in. spacing.

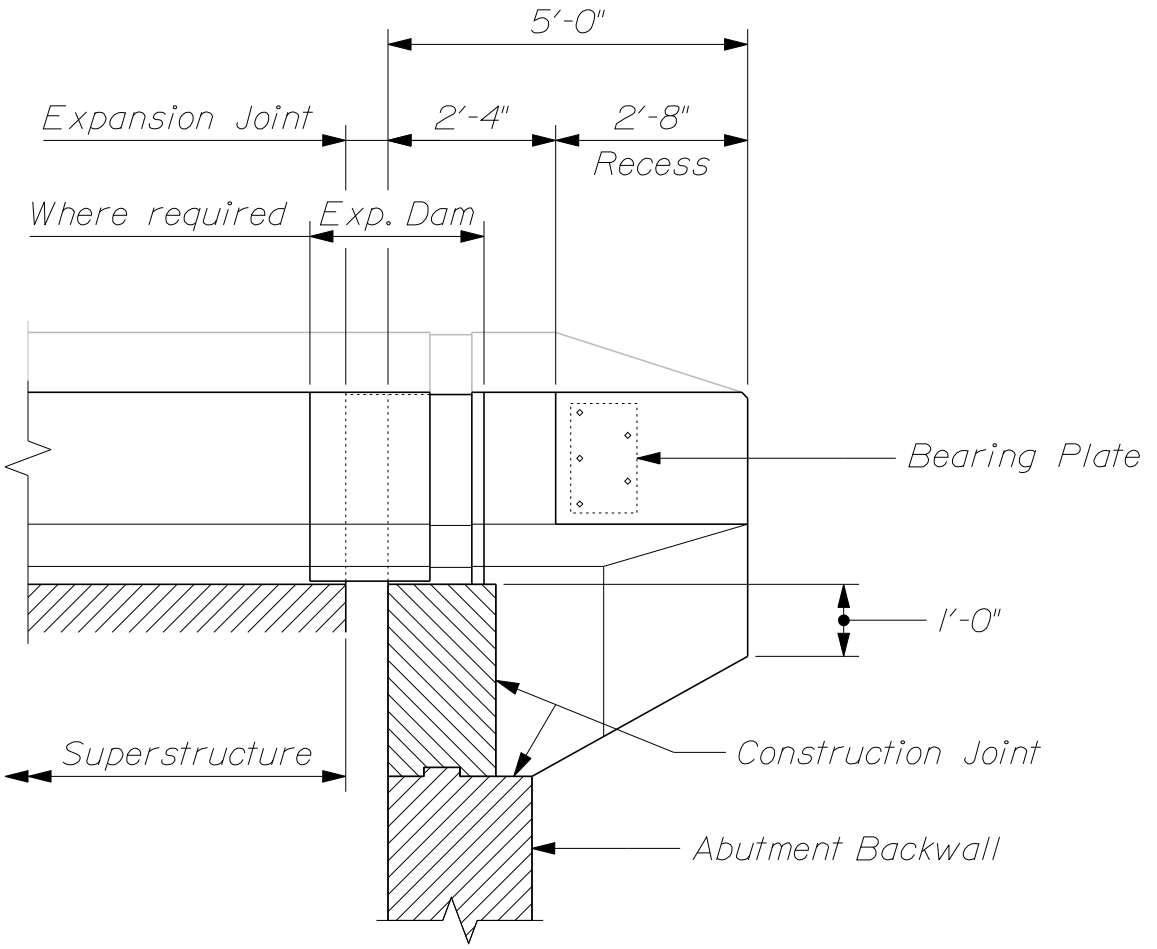
11. When flange thicknesses differ or flange cover plates are used, the temporary blocking thickness shall vary. Precast panels shall align vertically to within $\frac{1}{4}$ inch.

12. High - density expanded polystyrene foam shall be cut in the field to the required thickness.

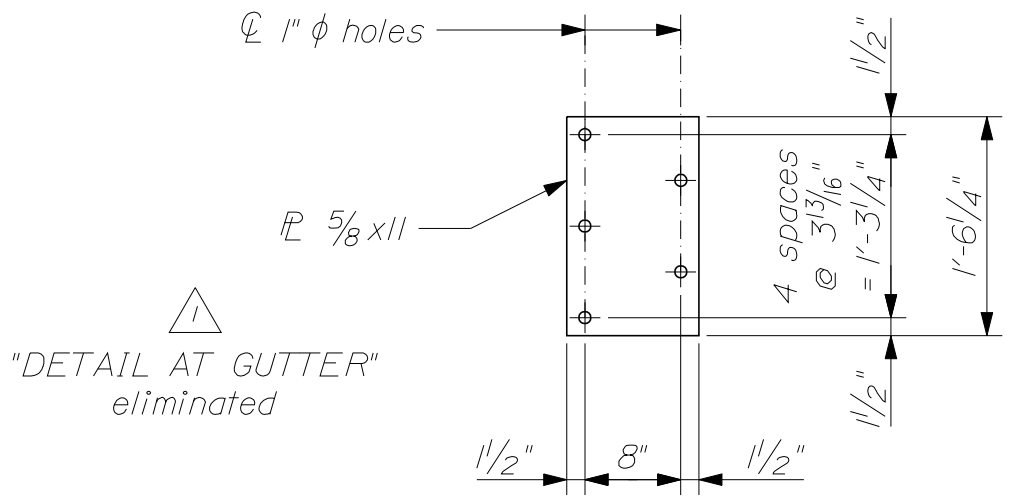
13. Mortar to be used for support under the deck panels shall have an approved high range water reducing additive.

14. The specific reinforcing steel layout for the cast - in - place portions of the slab shall be as shown on the Design Drawings.

15. If there is a conflict between these Standard Details and the Design Drawings, the requirements of the Design Drawings shall be followed.



~ CANTILEVERED END AT EXPANSION JOINT ~



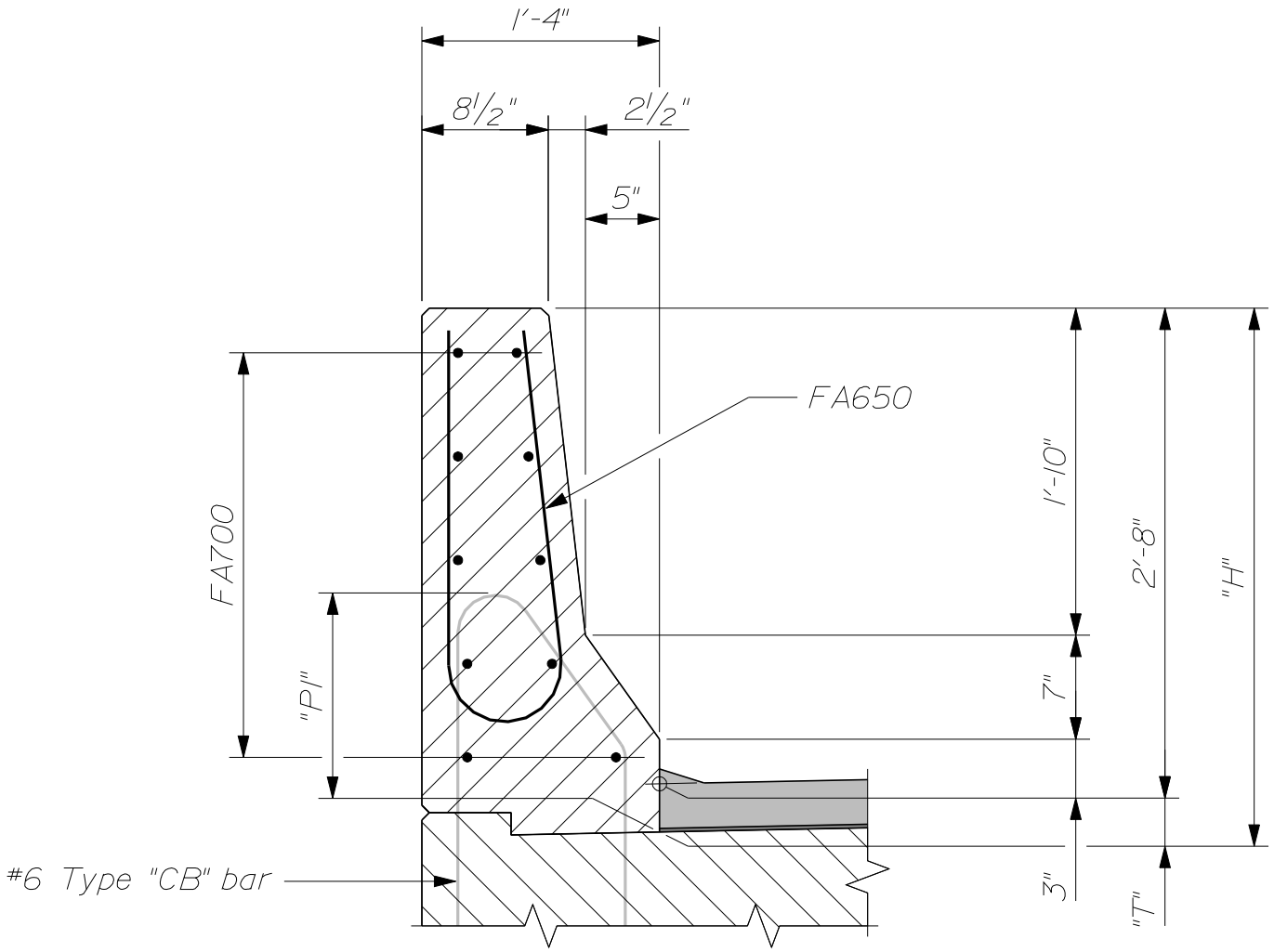
~ BEARING PLATE ~

PERMANENT CONCRETE BARRIER

Supl. Standard Detail

526(06)

1 August 2008



~ TYPICAL BARRIER SECTION ~ 1

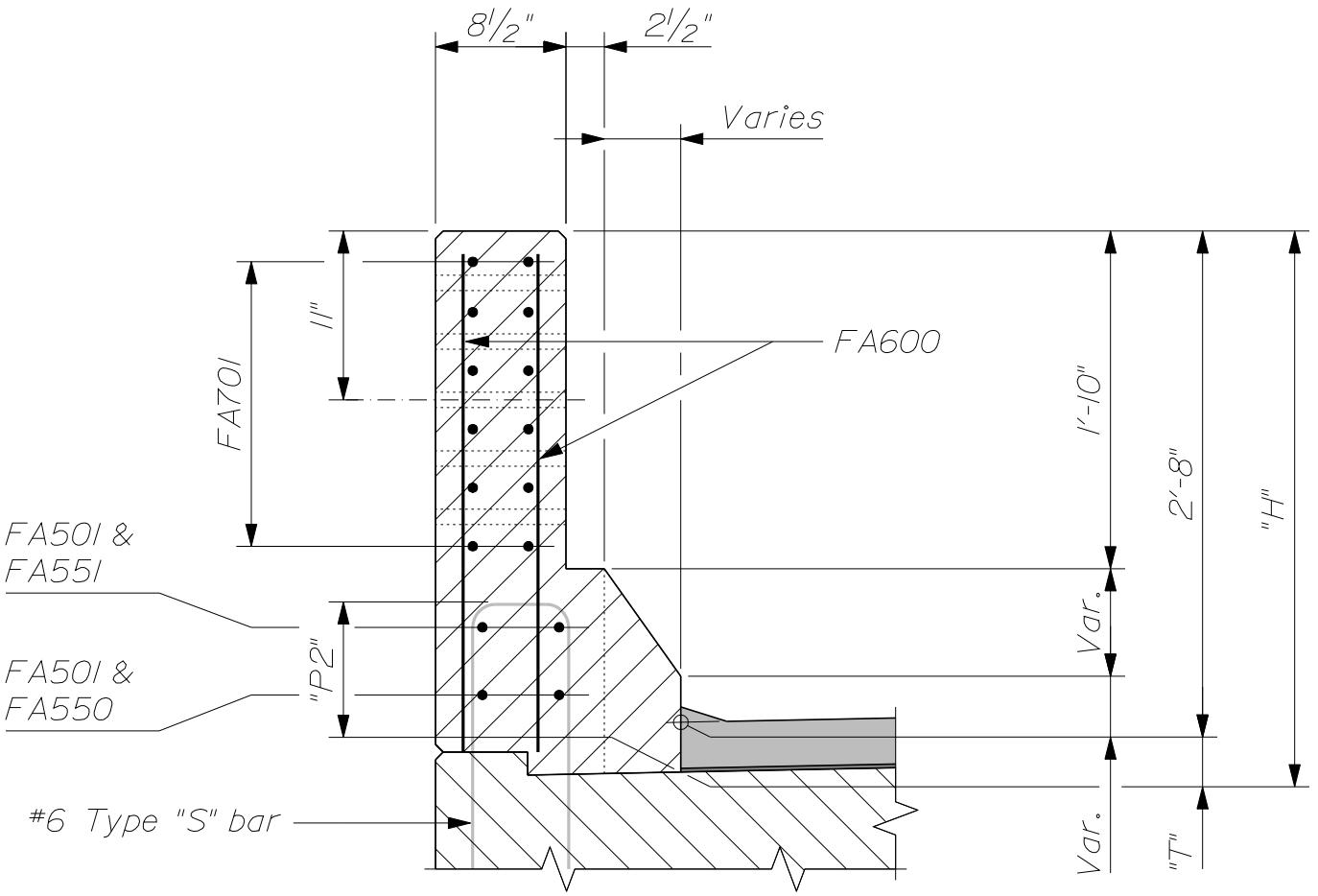
(Type IIIA)

For Wearing Surface ("T") details, refer to Section 502 ~ Concrete Curb

TABLE OF DIMENSIONS - TYPE IIIA				
Wearing Surface Type	"P1"	"P2"	"T"	"H"
Bituminous	1'-4 1/4"	11 1/4"	3 1/4"	2'-11 1/4"
Unreinforced Concrete	1'-3"	10"	2"	2'-10"
Integral	1'-1"	8"	0"	2'-8"

PERMANENT CONCRETE BARRIER

Supl. Standard Detail 526(08) 1 August 2008



~ BARRIER RECESS SECTION ~ 1

(Type IIIA)

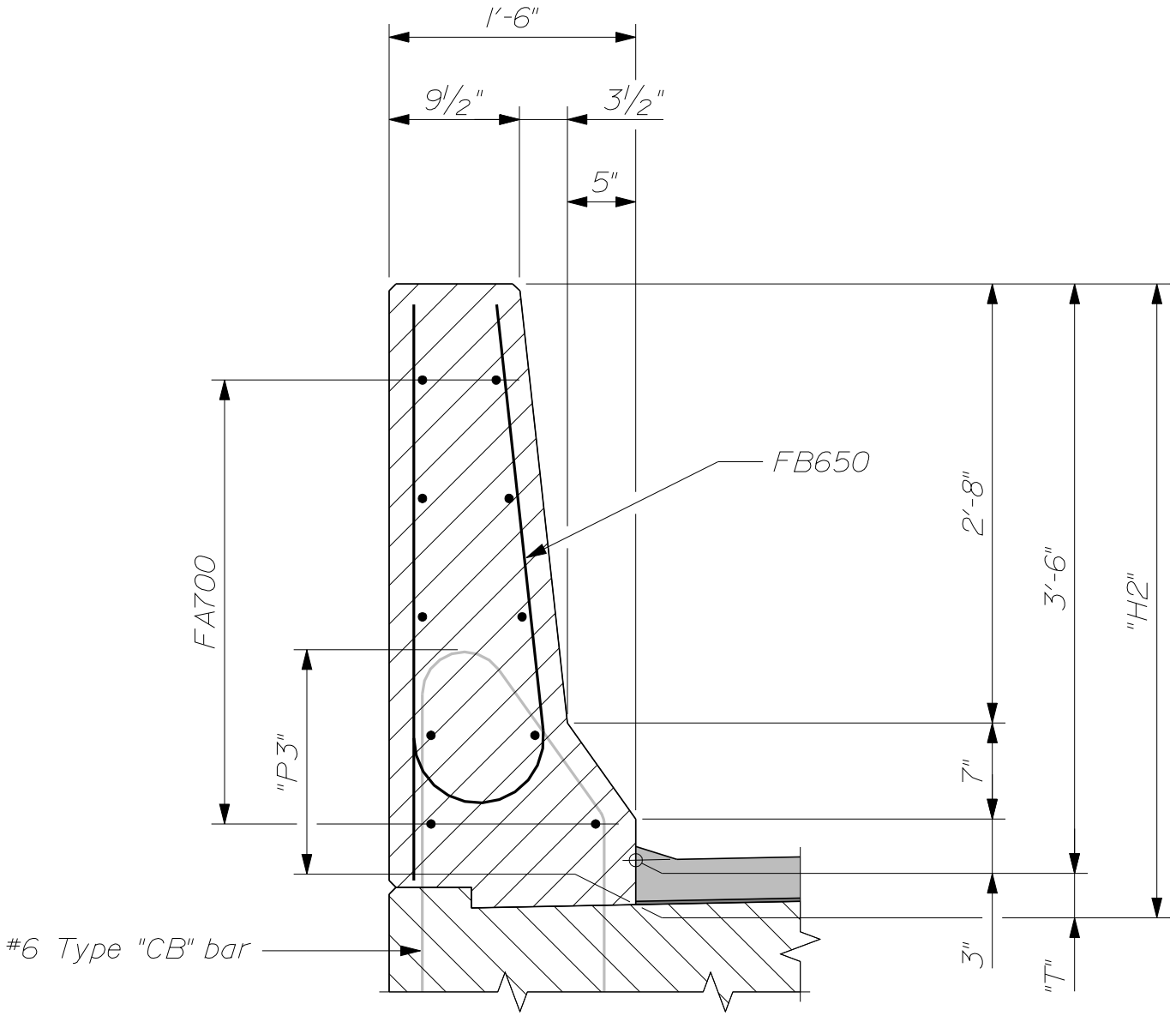
For Wearing Surface ("T") details, refer to Section 502 ~ Concrete Curb

PERMANENT CONCRETE BARRIER

Supl. Standard Detail

526(08A)

1 August 2008



~ TYPICAL BARRIER SECTION ~ 1

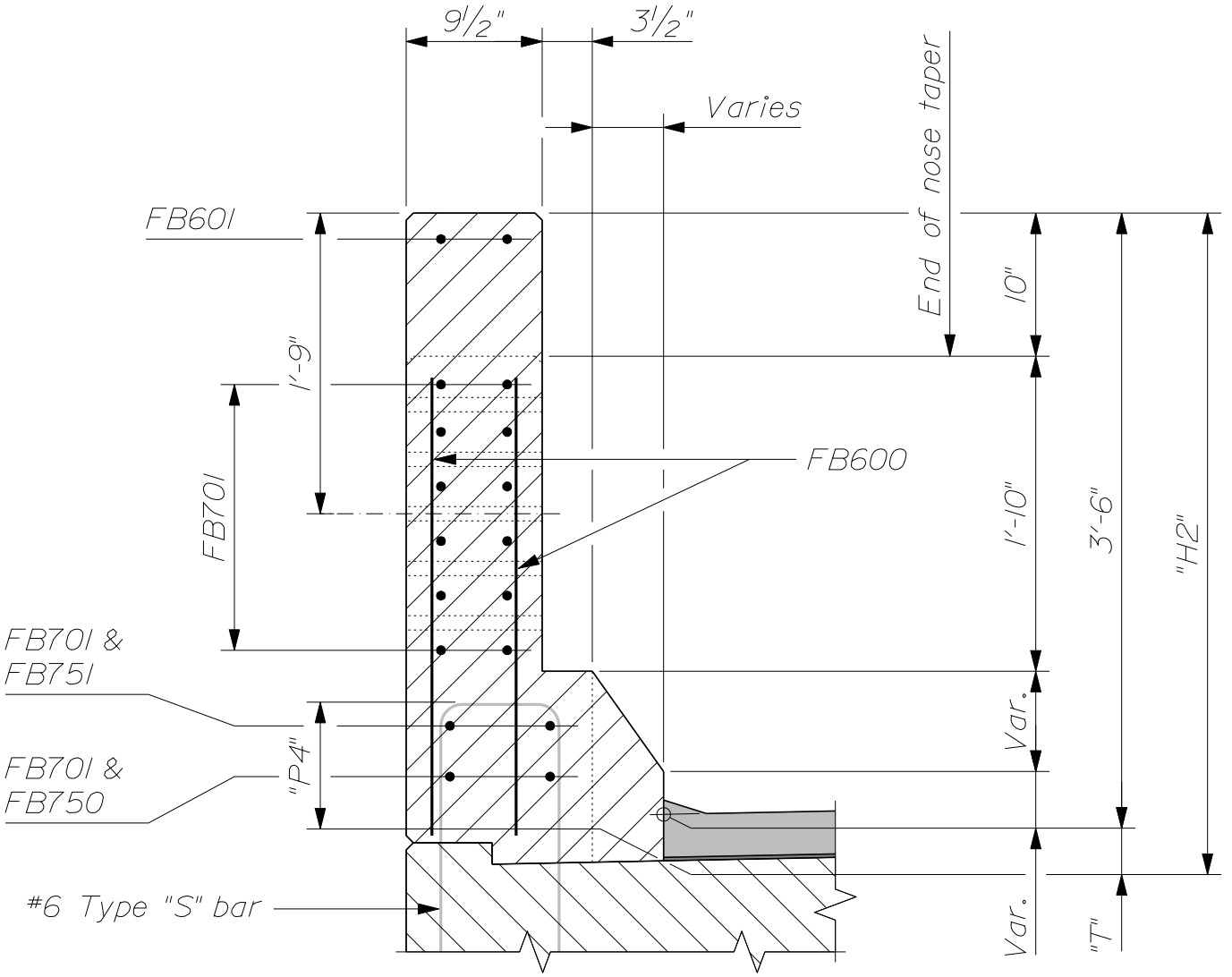
(Type IIIB)

For Wearing Surface ("T") details, refer to Section 502 ~ Concrete Curb

TABLE OF DIMENSIONS - TYPE IIIB				
Wearing Surface Type	"P3"	"P4"	"T"	"H2"
Bituminous	1'-6¾"	11¼"	3¼"	3'-9¼"
Unreinforced Concrete	1'-5½"	10"	2"	3'-8"
Integral	1'-3½"	8"	0"	3'-6"

PERMANENT CONCRETE BARRIER

Supl. Standard Detail 526(13) 1 August 2008



~ TYPICAL END SECTION ~ 1

(Type IIIB)

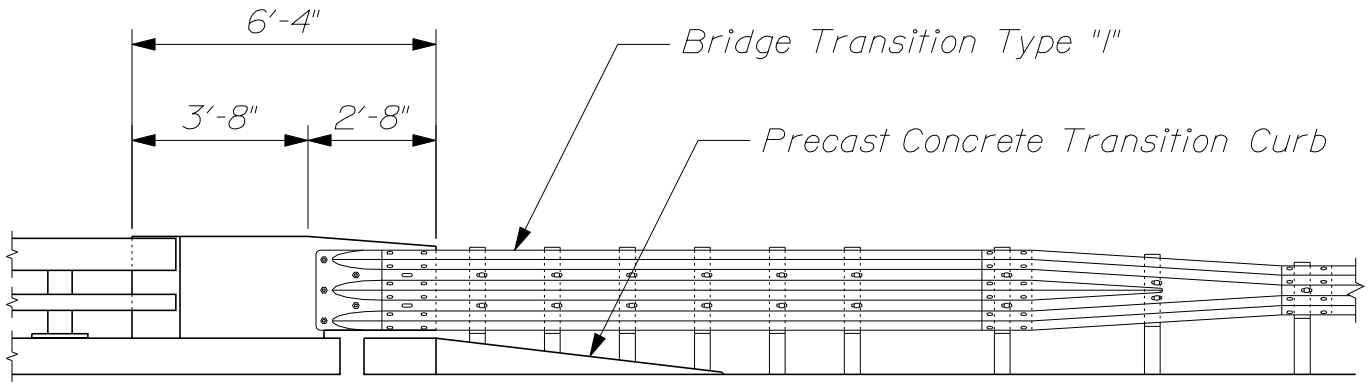
For Wearing Surface ("T") details, refer to Section 502 ~ Concrete Curb

Supl. Standard Detail

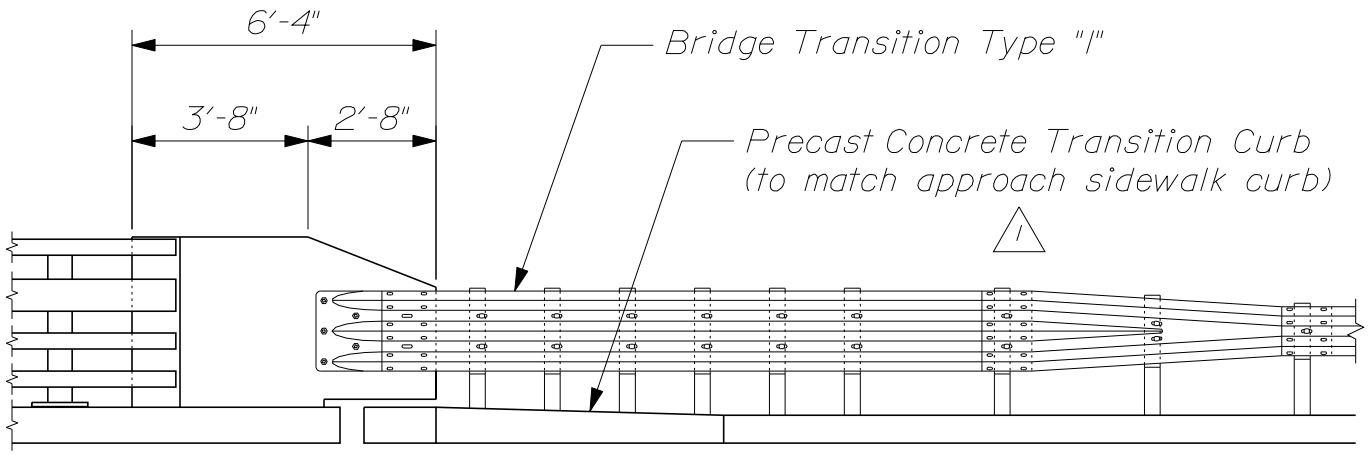
PERMANENT CONCRETE BARRIER

526(14)

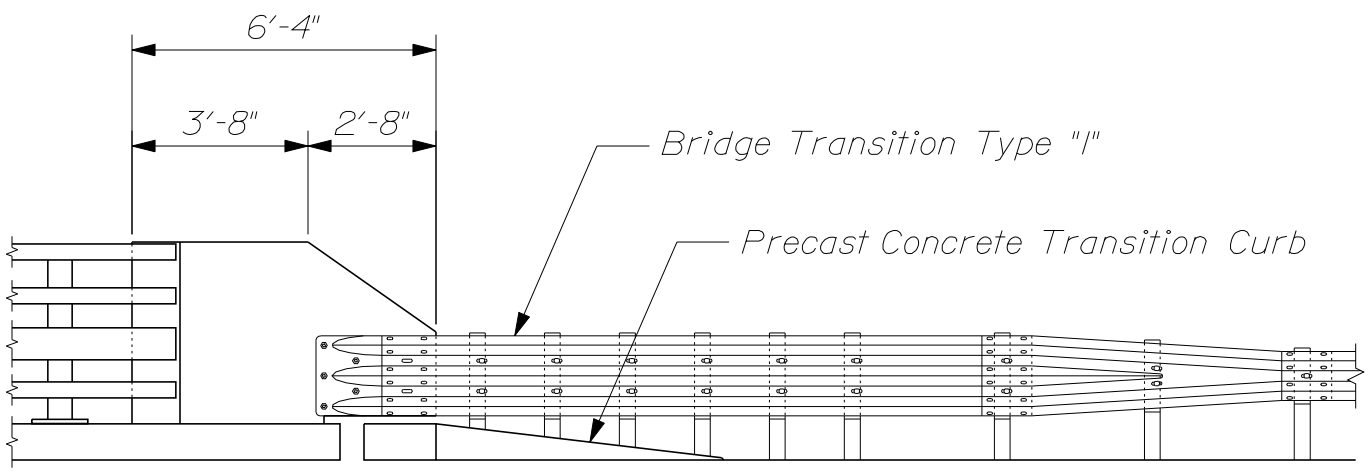
1 August 2008



~ CONCRETE TRANSITION BARRIER ~
(Traffic Railing)



~ CONCRETE TRANSITION BARRIER ~
(Traffic / Pedestrian Railing)



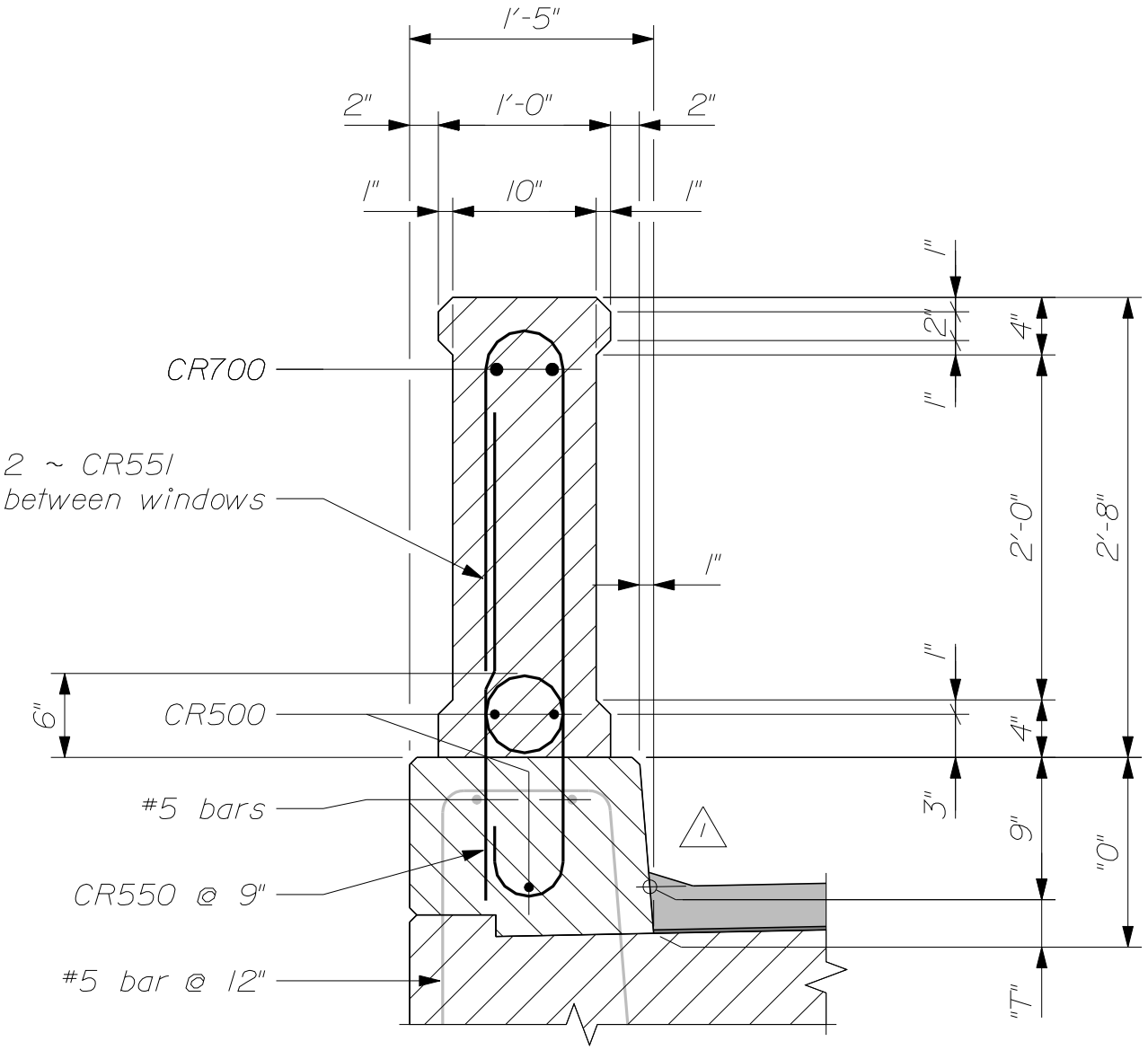
~ CONCRETE TRANSITION BARRIER ~
(Traffic / Bicycle Railing)

Supl.
Std. Detail

CONCRETE TRANSITION BARRIER

526(21)

1 August 2008



~ SECTION BETWEEN WINDOWS ~

(Traffic Rail)

For Wearing Surface ("T") details, refer to Section 502 - Concrete Curb

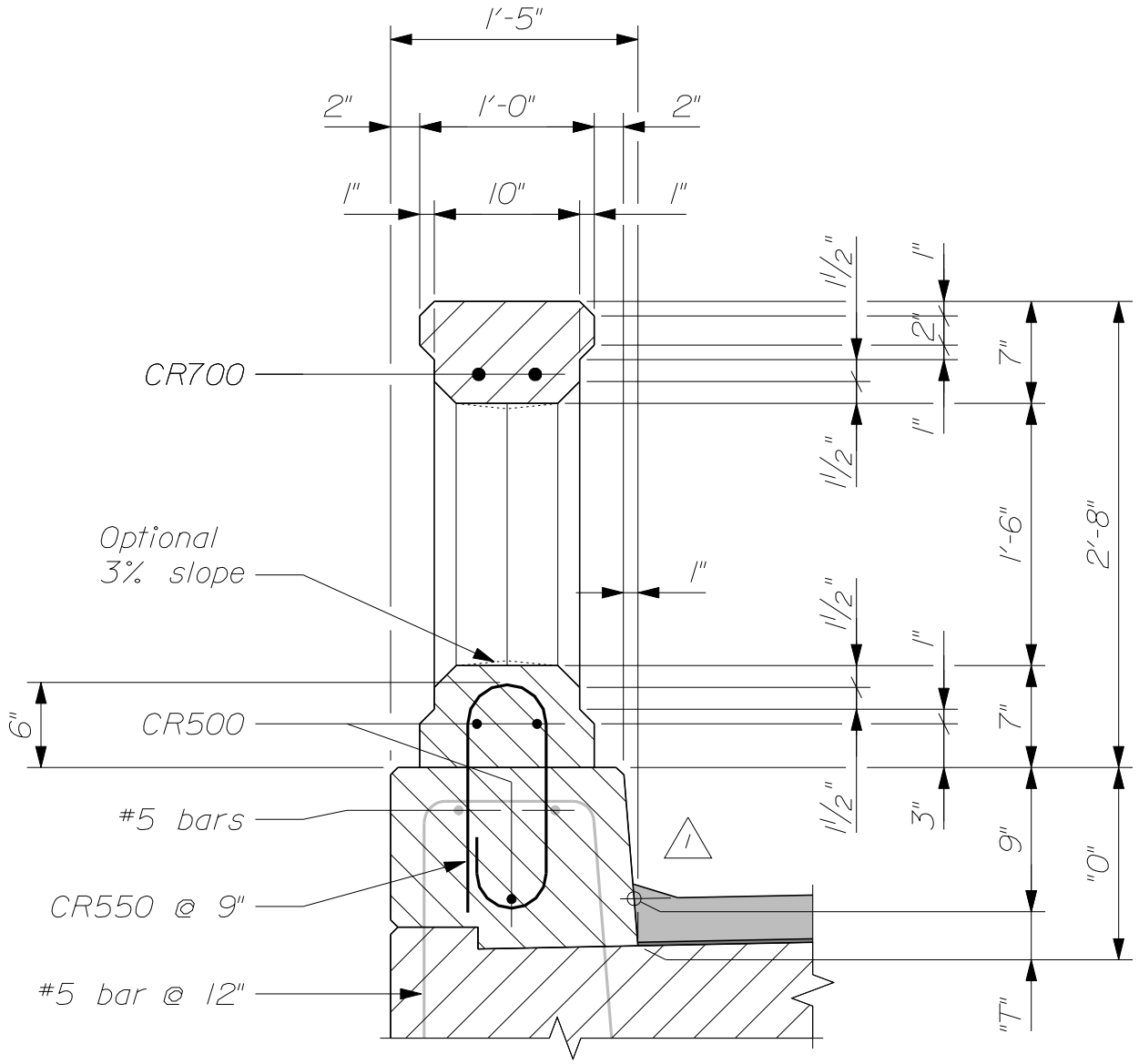
TABLE OF DIMENSIONS 1		
Wearing Surface Type	"T"	"O"
Bituminous	3 1/4"	1'-0 1/4"
Unreinforced Concrete	2"	11"
Integral	0"	9"

TEXAS CLASSIC RAIL

Supplemental
Standard Detail

526(39)

1 August 2008



~ SECTION THROUGH WINDOW ~

(Traffic Rail)

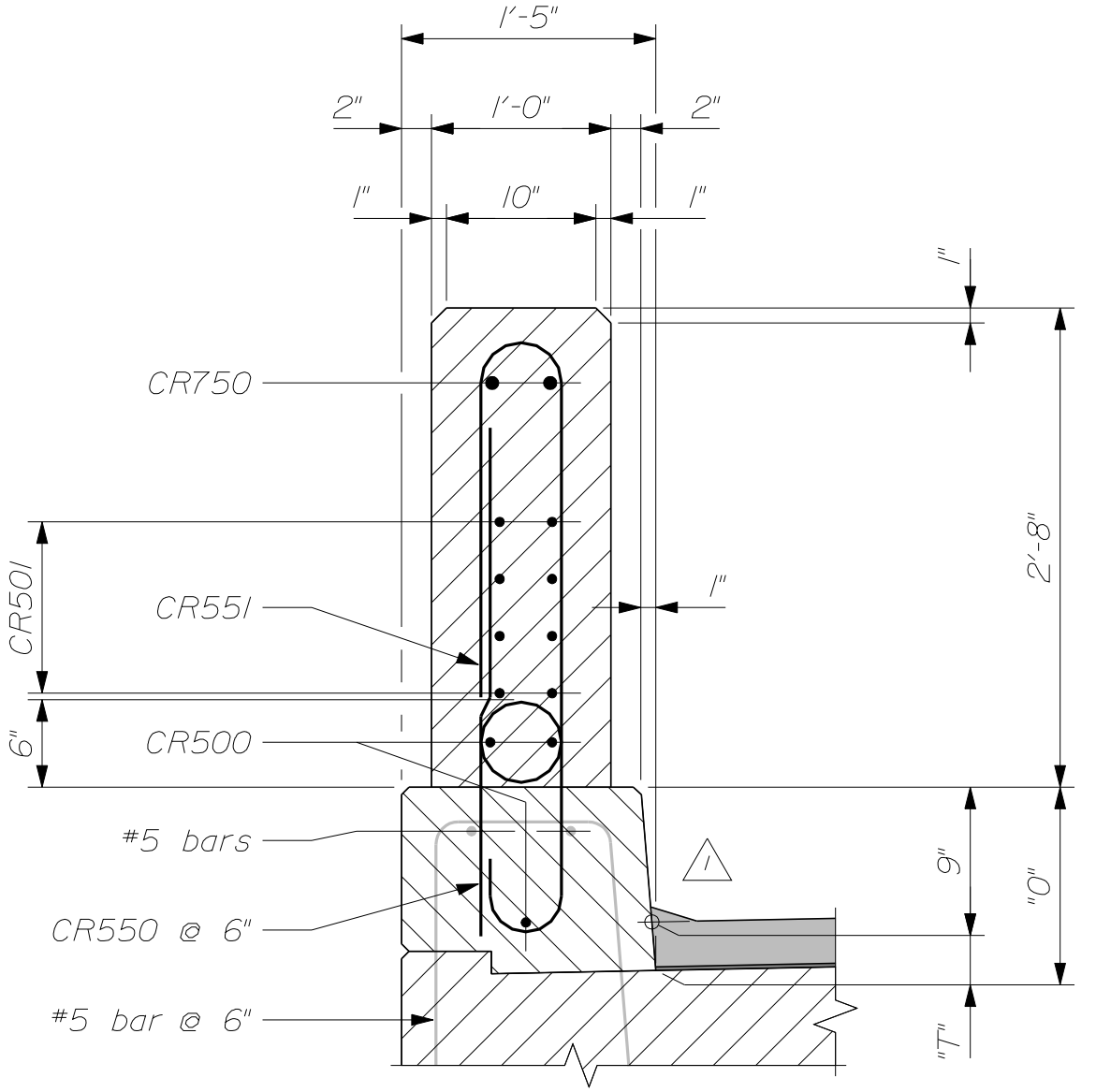
For Wearing Surface ("T") details, refer to Section 502 - Concrete Curb

Supplemental
Standard Detail

TEXAS CLASSIC RAIL

526(40)

1 August 2008



~ SECTION THROUGH POST ~

(Traffic Rail)

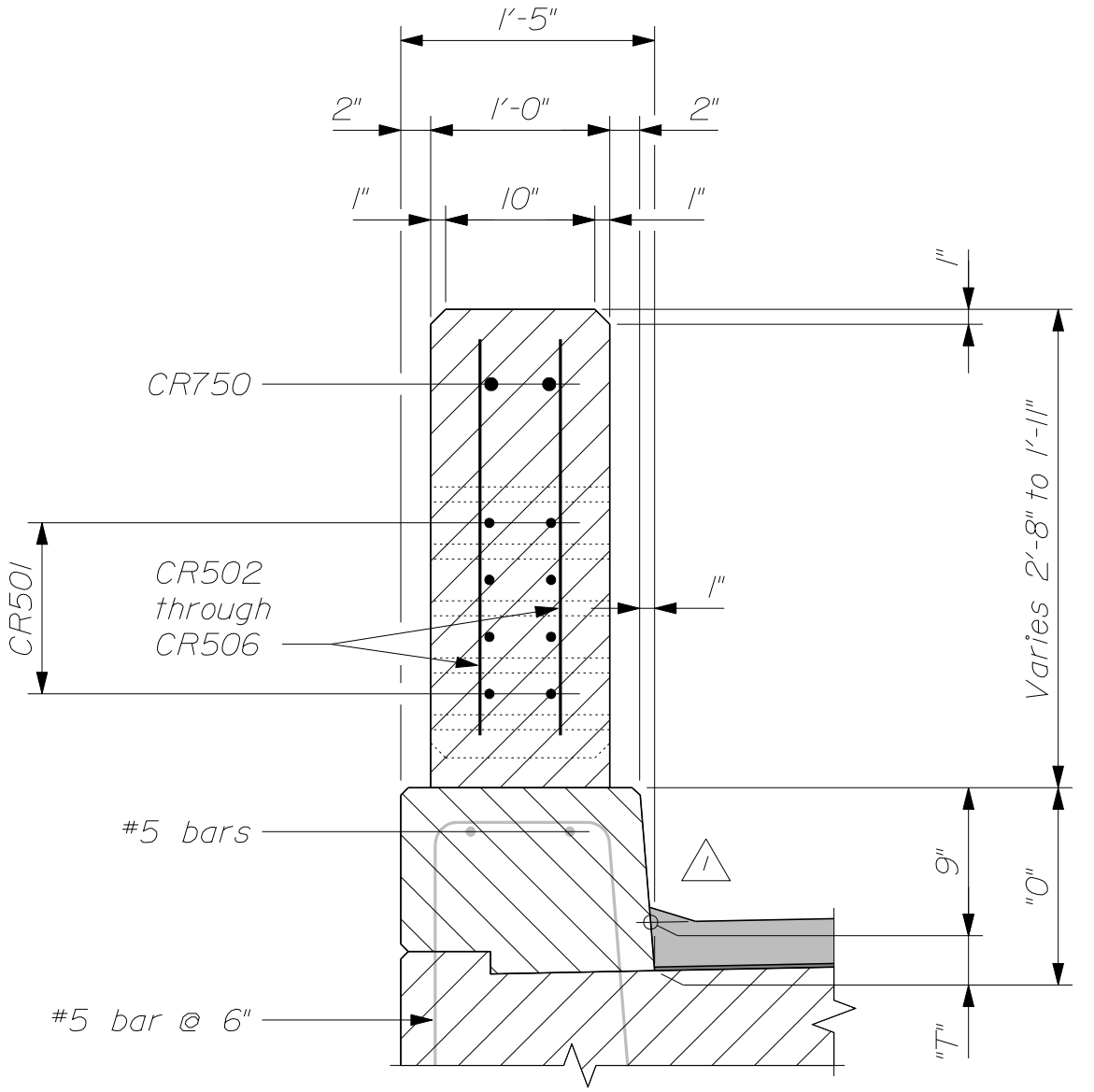
For Wearing Surface ("T") details, refer to Section 502 - Concrete Curb

Supplemental
Standard Detail

TEXAS CLASSIC RAIL

526(41)

1 August 2008



~ SECTION THROUGH NOSE ~

(Traffic Rail)

For Wearing Surface ("T") details, refer to Section 502 - Concrete Curb

Supplemental
Standard Detail

TEXAS CLASSIC RAIL

526(42)

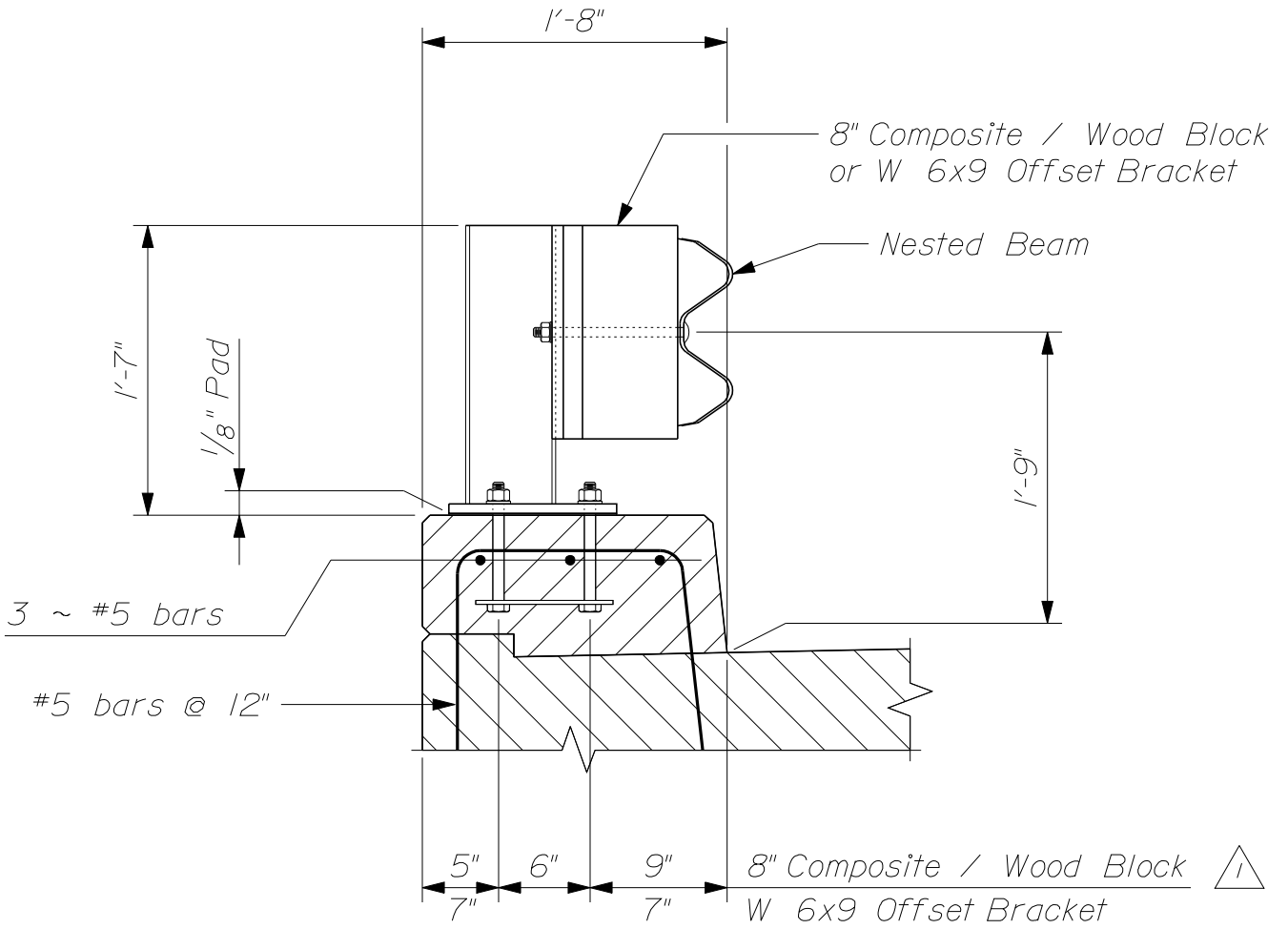
1 August 2008

GUARDRAIL TYPE 3 - SINGLE RAIL BRIDGE MOUNTED

Supplemental Standard Detail

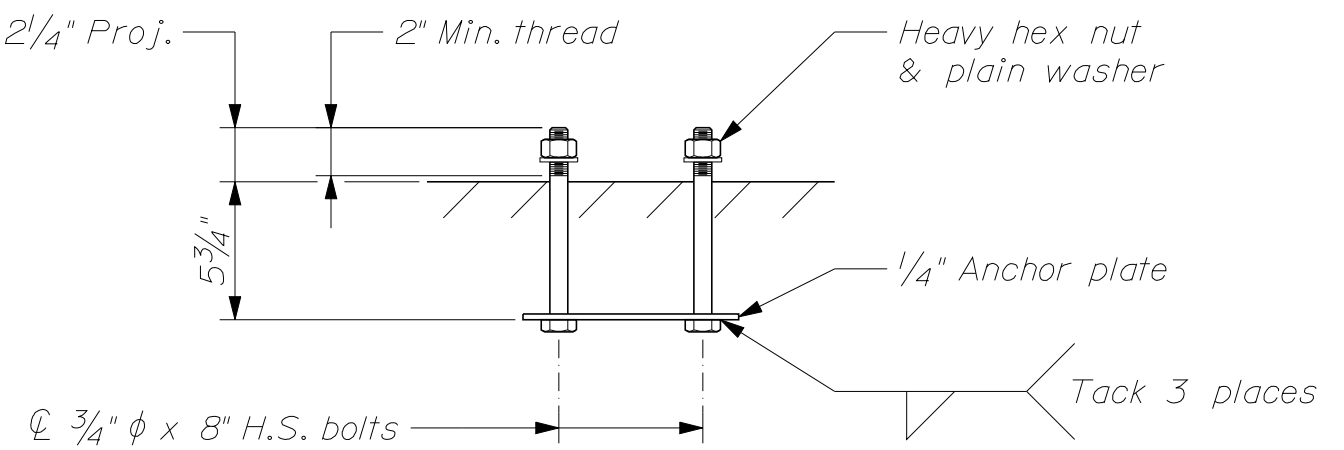
606(20)

August 2008



-- TYPICAL RAIL SECTION --

(Post shown positioned for use with 8" Composite / Wood Block)



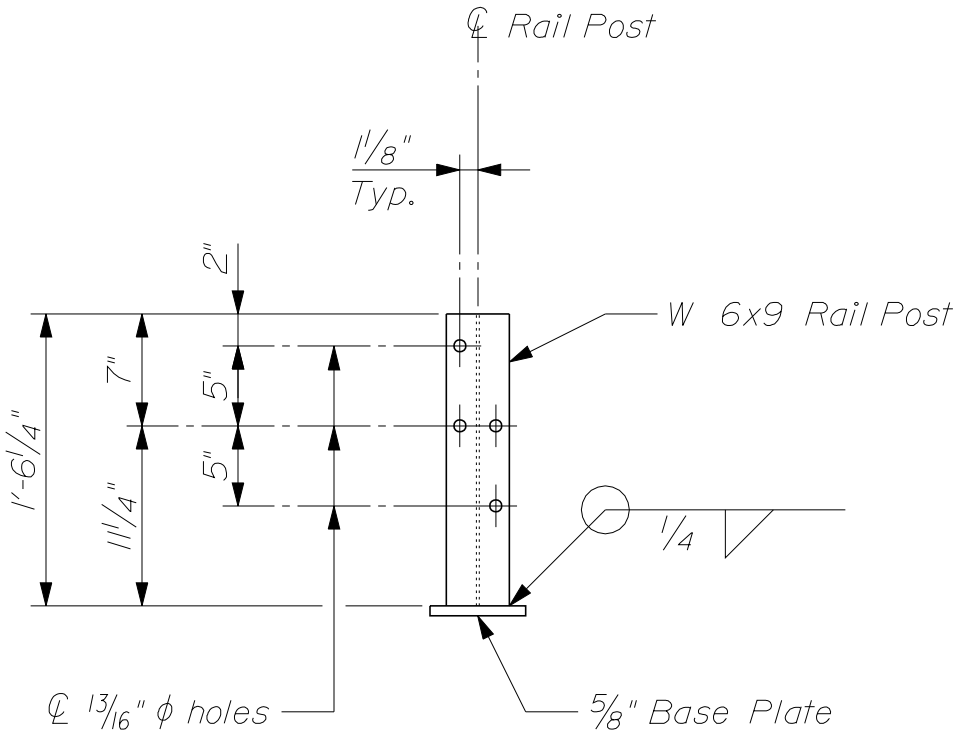
-- ANCHOR BOLT DETAIL

GUARDRAIL TYPE 3 - SINGLE RAIL BRIDGE MOUNTED

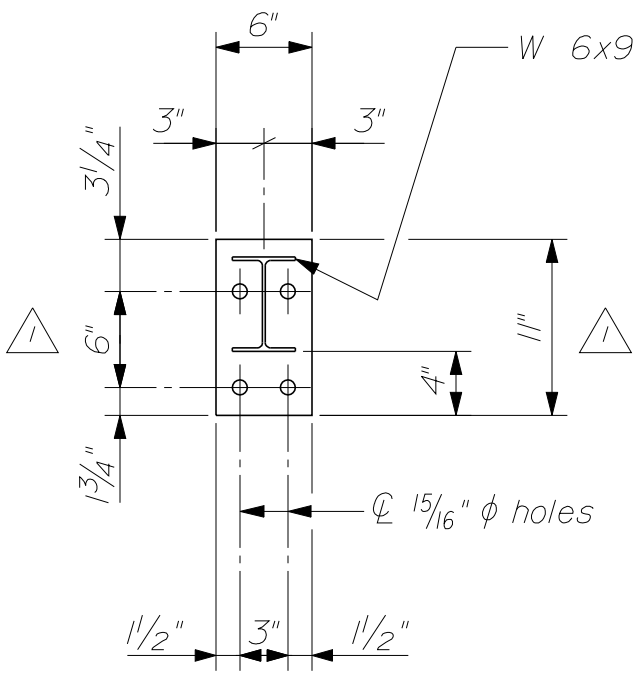
Supplemental Standard Detail

606(21)

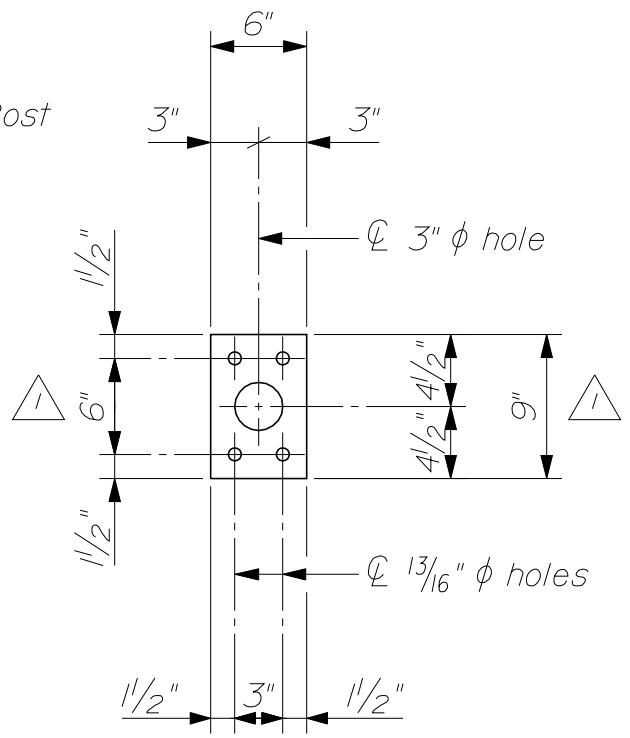
1 August 2008



-- RAIL POST ELEVATION --



-- BASE PLATE PLAN --



-- ANCHOR PLATE PLAN --

GUARDRAIL TYPE 3 - SINGLE RAIL BRIDGE MOUNTED

Supplemental Standard Detail

606(22)

1 August 2008

NOTES:

1. All work and materials shall conform to the provisions of Section 507 - Railings and Section 606 - Guardrail of the Standard Specifications, as applicable.

2. All exposed cut or sheared edges shall be broken and free of burrs.

3. Curb mounted posts shall be set normal to grade unless otherwise shown.

1 4. Composite / wood blocks or steel offset brackets shall match those of the associated highway guardrail system.

5. Twenty - five percent of the post - to - base welds in a production lot shall be tested by the Magnetic Particle Method. If rejectable discontinuities are found, another twenty - five percent of that production lot shall be tested. If rejectable discontinuities are found in the second twenty - five percent, all post - to - base welds in that lot shall be tested. Acceptance criteria shall be in accordance with the latest editon of the AWS D1.5 Bridge Welding Code.

6. All non - stock parts shall be galvanized after fabrication in accordance with ASTM A 123, except that hardware shall meet the requirements of either ASTM A 153 or ASTM B 695, Class 50, Type I. Parts except hardware shall be blast - cleaned prior to galvanizing in accordance with SSPC - SP6.

7. Anchor bolts shall be set with a template. Nuts securing the post base shall be tightened to a snug fit and given an additional 1/8 turn.

8. Nested guardrail beam and extra posts beyond the pay limits of the Bridge - Mounted Guardrail will be paid for as twice the required length of Guardrail Type 3 - Single Rail.

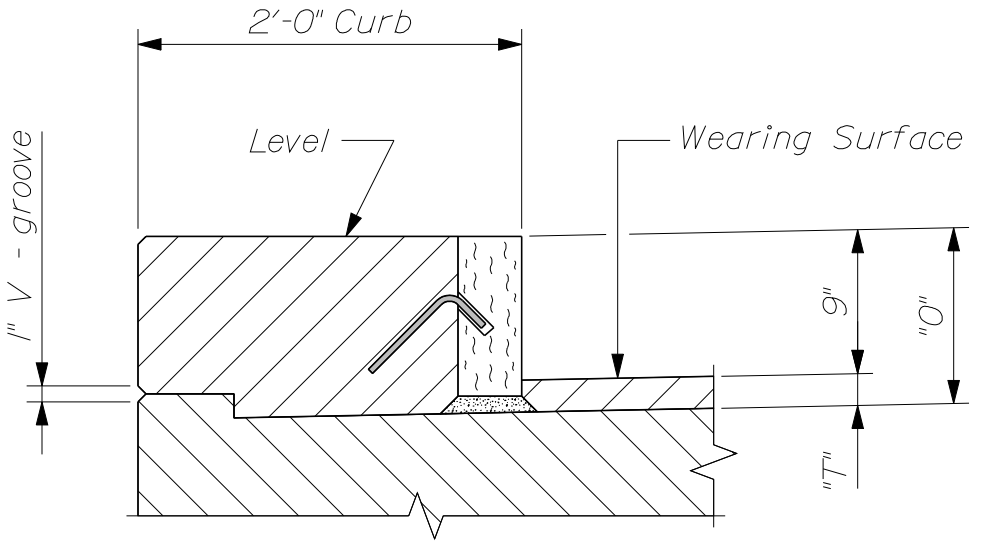
1 9. For details of the Concrete Transition Curb, refer to Standard Details Section 609, Curb. Payment for Concrete Transition Curb will be made under Item No. 609.247, Terminal Curb Type 2 - 7 ft.

MATERIALS:

Guardrail Beam, Composite or Wood Blocks, Offset Brackets & Posts	See Standard Specifications Section 710
Base Plate & Anchor Plate	AASHTO M 270M/M 270, Grade 250 (36) ASTM A 709/A 709M, Grade 36 (250)
Anchor bolts	ASTM A 449 or ASTM A 1554, Grade 55
Anchor bolt washers / nuts	ASTM F 436 / ASTM A 563

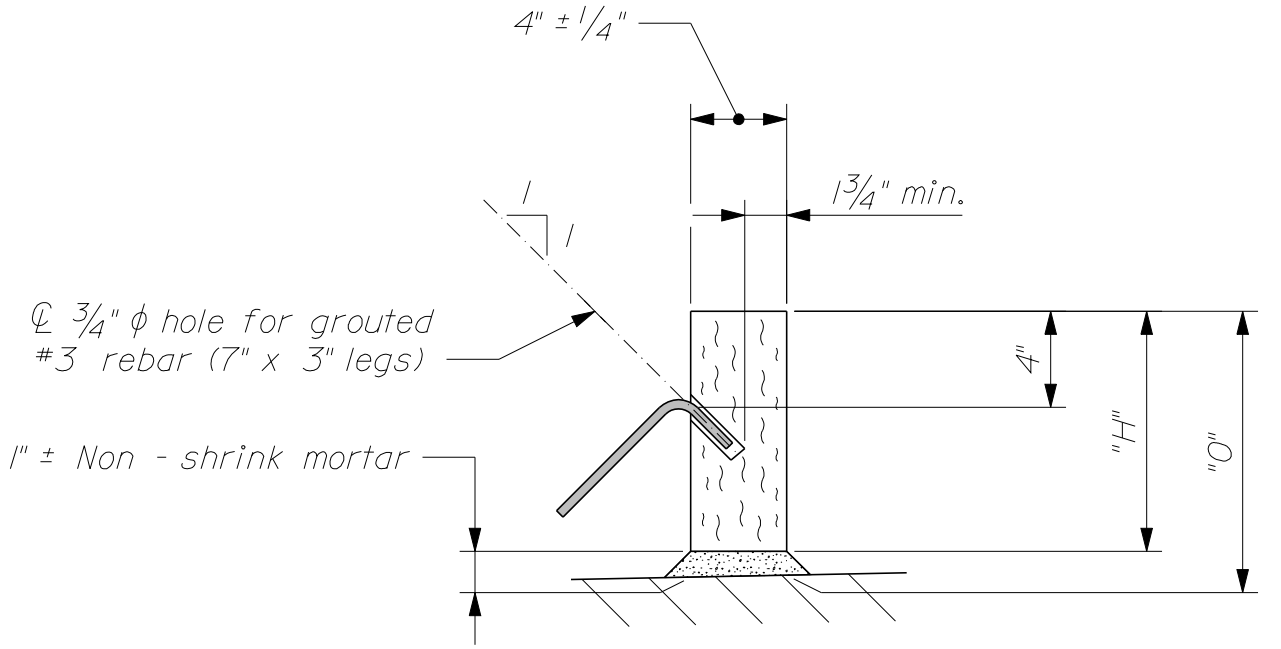
GUARDRAIL TYPE 3 - SINGLE RAIL BRIDGE MOUNTED

Supplemental Standard Detail 606(23) 1 August 2008



~ CONCRETE CURB WITH VERTICAL BRIDGE CURB ~

For Wearing Surface ("T") details, refer to Section 502 ~ Concrete Curb



~ VERTICAL BRIDGE CURB DETAIL ~ 1

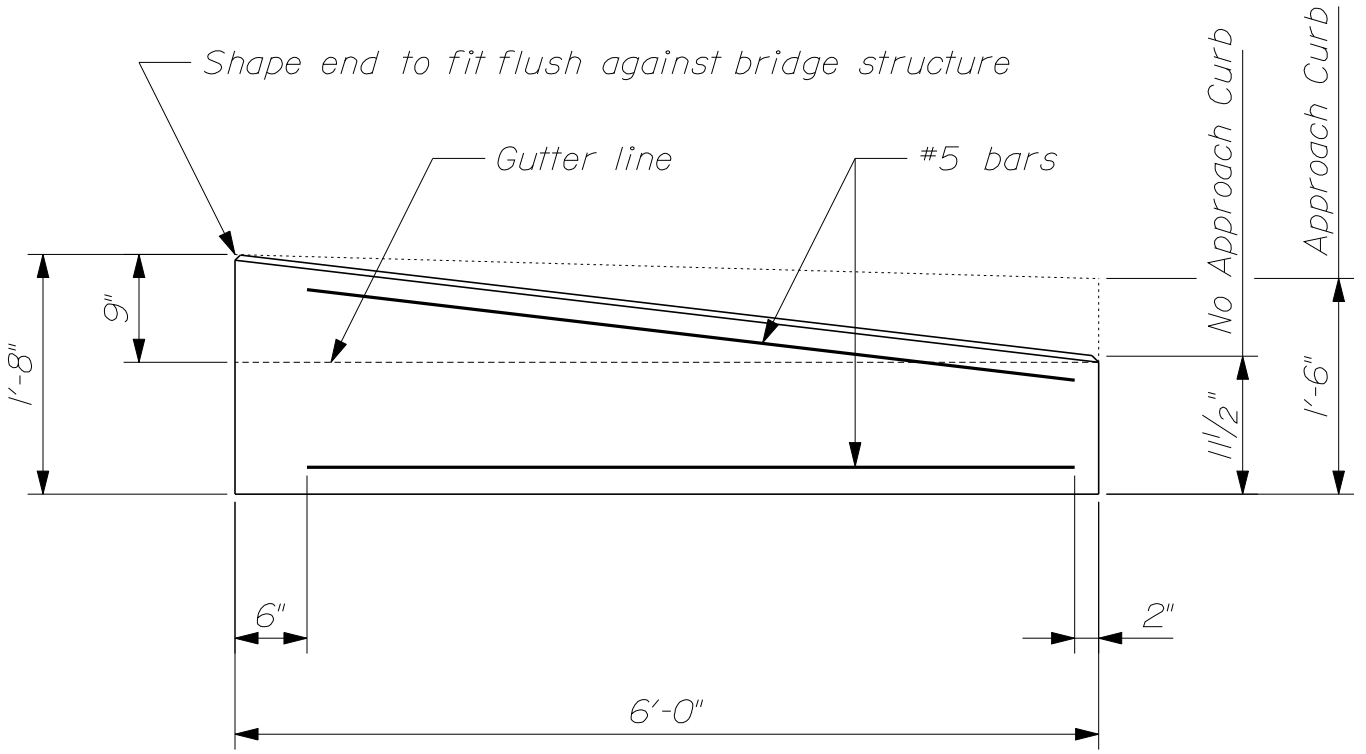
TABLE OF DIMENSIONS				
Type	Wearing Surface Type	"T"	"H"	"O"
1A	Unreinforced Concrete	2"	10" ± 1/4"	11"
1B	Bituminous	3 1/4"	11 1/4" ± 1/4"	1'-0 1/4"

Supplemental Standard Detail

VERTICAL BRIDGE CURB

609(06)

1 August 2008



~ ELEVATION ~

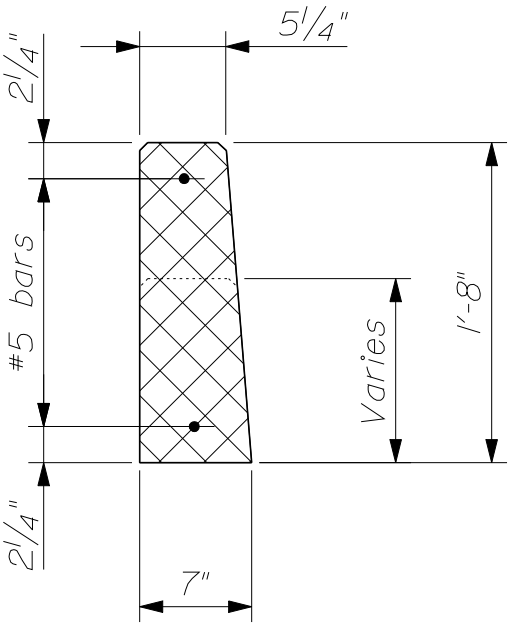
NOTES:

1. Precast Concrete Transition Curb shall meet the requirements of Standard Specifications Section 609 - Curb.

2. Dimensions shown are designed to accommodate a 9" reveal bridge curb with a battered face. Dimensions shall be adjusted to fit other situations as required.

3. Alternate transition curb sections may be used as approved by the Resident.

4. Unless otherwise indicated, payment will be made under Item No. 609.247, Terminal Curb Type 2 - 7 ft.



~ SECTION ~

Supl. Standard Detail

PRECAST CONCRETE TRANSITION CURB

609(08) 1

1 August 2008